Preliminary Announcement and Call for Papers — i-SAIRAS 2003

NARA, JAPAN   May 19-23 2003

The 7th International Symposium on Artificial Intelligence, Robotics and Automation in Space

Symposium Chairpersons
Tsutomu Iwata (NASDA)
Richard J. Doyle(JPL)
Hanspeter Lutz(ESA)

Participating Organizations

ASI

CNES

CSA

DLR

ESA

ISAS

NAL

NASA

NASDA

With the cooperation of
(tentative)

Japan Society for Aeronautical
  and Space Sciences
Japan Society of Mechanical
  Engineers
Japan Society for Artificial
  Intelligence
Robotics Society of Japan
Society of Instrument and
  Control Engineers

i-SAIRAS 2003 is the seventh in this series of international symposia. The six previous meetings were held in Kobe, Japan (1990), Toulouse, France (1992), Pasadena, USA (1994), Tokyo, Japan (1997), Noordwijk, Netherlands (1999) and Montreal, Canada (2001).

The objective of i-SAIRAS 2003 is to provide an international forum for engineers, researchers, and managers to discuss the development and application of artificial intelligence and robotics to space programs.

Symposium Venue

i-SAIRAS 2003 will be held at NARA-Ken New Public Hall in NARA city. Nara is well known as the World Heritage ancient city and Keihanna (Kansai area) Science City in Japan. To know new things, learn by studying the old.

Symposium Topics

The main topics include, but are not limited to :

Artificial Intelligence for Space Applications:
• Spacecraft autonomy (mission planning and execution, resource management, fault protection, science data analysis, guidance & control, smart sensors, dependable computing, and related software engineering topics).
• Mission operations automation (decision support tools for planning and scheduling, anomaly detection and fault analysis; innovative operations concepts, data visualizations, design tools, and electronic documentations).
• Artificial intelligence methods (automated planning and scheduling, agents, model-based reasoning, machine learning and data mining).

Robotics and Automation for Space Applications:
• Application scenarios (e.g. on-orbit assembly, external and internal payload tending, satellite servicing, planetary surface exploration, ground processing), programmatic and utilization aspects.
• Robotics technologies (support equipment, ground segments for teleoperation, mobility, manipulations, end effectors and tools, sensing, robot vision, control, robot friendly design, software and hardware architecture).
• Technologies for space laboratory automation (payload control systems, data communications and imaging technologies, user interfaces and telepresence/telescience).

Similar to the previous i-SAIRAS Symposium, i-SAIRAS 2003 will put increased emphasis on the following aspects of AI and R&A:
• Overview of the current international research and developments for near, medium and long-term technology developments for space projects in space automation and robotics, and in artificial intelligence.
• Presentations with sufficient technical detail that address applications of interest to a large audience of professionals from private and governmental organizations.

Call for Papers

Prospective authors are invited to submit a 2-page extended abstract of their paper by September 15, 2002.

IMPORTANT DATES (Tentative)	
submission of extended abstracts	September 15, 2002
notification of acceptance	November 30, 2002
final papers and revised extended abstracts	February 10, 2003

Symposium Secretariat

Suggestions for topics, events and tours are gladly welcome. Please direct these and other inquiries about i-SAIRAS 2003 to isairas@nasda.go.jp.

To learn more, visit our Web site at

http://giken.tksc.nasda.go.jp/isairas